THE APPLICATION OF FAIR VALUE ACCOUNTING IN BOSNIA AND HERZEGOVINA

1 Amira Pobrić, University of East Sarajevo, Faculty of Economics Brčko
*Corresponding author E-mail: amira.pobric@gmail.com
ORCID ID:0000-0001-8902-7223

ARTICLE INFO

Preliminary Communication
Received: 15.06.2019
Revised: 03.11.2019
Accepted: 09.12.2019
doi 10.7251/ACE1931149P
UDC
005.915(497.6):[657.6:336.76

Keywords:
fair value accounting, Bosnia and Herzegovina, non-financial assets, financial companies, non-financial companies, company size.

JEL Classification: M41

ABSTRACT

This study investigates the application of fair value accounting in companies in Bosnia and Herzegovina. The study was conducted on a sample of 190 companies. The application of fair value accounting causes a lot of controversy related to the relevance and reliability of fair value information. It is believed that the extent to which fair value measurement is used reflects attitudes of financial statement preparers about the usefulness of this model at its best. The findings of this study suggest that most companies in Bosnia and Herzegovina do not have tendency to apply fair value accounting. It is found that half of the companies in the sample do not use fair value accounting at all. Almost half of the companies that use fair value accounting use it just because they own assets that require fair value measurement. Fair value accounting is much more used in financial and larger companies than in non-financial and smaller companies. Companies mostly use fair value accounting for the measurement of investment property. However, they use it for the measurement of intangible assets at a minimum. The findings also suggest that the application of fair value accounting increases the uncertainty in financial statements. The quality of fair value disclosures is very low. Numerous companies do not disclose information on fair value hierarchy and valuation techniques that were used for fair value measurement. Companies that disclose this information mostly use indirectly observable inputs (Level 2) for fair value measurement and these create a lot of room for earnings management.

1. INTRODUCTION

The fair value concept is an approach to measurement of assets and liabilities by applying market prices (mark-to-market) or reasonable approximation of market prices (mark-to-model). This concept is not new, it dates back to the past century. The volume of its application to accounting is increasing. Major accounting standard setters, such as the International Accounting Standards Board (IASB), have encouraged convergence of accounting practice towards fair value accounting. The IASB have considered fair value as a possible measurement in almost every standard (He, Wright & Evans, 2018). The current financial reporting practice is a mix of fair value accounting and historical cost accounting.

Greater use of fair value measurement has caused a lot of controversy and vigorous debates among regulators, accounting researchers, practitioners and various market participants. Fair value proponents defend their view that fair value accounting is superior to historical cost accounting, as it improves the relevance and timeliness of accounting information and therefore, it improves financial reporting quality. They believe that fair value better reflects the current financial state of reporting entities and enables a better assessment of past performance. Researchers mostly agree that fair value provides useful information regarding amounts, timing and uncertainty of future cash flows (Šodan, 2015).

While proponents promote the opinion that fair value is the most relevant measurement basis for financial reporting, others express concerns about the reliability of fair value accounting. Opponents think that fair value is not as creditable and verifiable as historical cost and that its use leads to the failure of the historical cost model which performs well and is well understood (Al-Khadash & Abdullatif, 2009).

Fair value relevance is largely based on the concept of market efficiency. In theory, fair value provides an unbiased measure of assets and liabilities on the reporting date, as the items are expressed at their market values. It also summarises current assessment of time value of money and risk. In this way, fair value provides users with relevant and reliable information that is useful for decision-making (He et al., 2018).

In practice, the prerequisite of market efficiency is not met. Market prices of certain assets are not available in the absence of an active market. In such circumstances, fair value is either based on the market prices of similar items (Level 2 fair values), or on the best estimates of management (Level 3 fair values). Fair value estimates are likely to be subject to errors or managerial manipulation. It decreases accounting information reliability. If the application of fair value leads to significant distortions in a statement of financial position and a statement of

profit or loss, it is possible that investors make wrong investment decisions. This can result in more information asymmetry and agency conflicts between investors and managers (Wang & Zhang, 2017; Bick, Orlova & Sun, 2018).

It is the fact that fair value accounting has arisen from developed economies. Its creators assumed that it would be implemented in deep and liquid markets with developed financial reporting practice. Most empirical studies that have proven the superiority of fair value accounting over historical cost accounting used data from developed economies. There is little evidence on whether emerging economies are capable of adapting to fair value accounting. It is not clear if fair value accounting is superior to historical cost accounting in emerging economy environments with insufficiently developed markets (Peng & Bewley, 2010).

The aim of this study is to investigate to what degree the application of fair value accounting in Bosnia and Herzegovina is performed. It is assumed that the process of applying fair value accounting is particularly challenging for companies in Bosnia and Herzegovina because this country lacks many elements of an efficient market that are necessary in order to implement fair value accounting successfully. It would be interesting to scrutinize to what degree fair value accounting is used when financial statement preparers are given an option to choose between fair value accounting and historical cost accounting.

Apart from the introductory section, the paper is structured as follows: section 2 gives an overview of the previous fair value studies, section 3 explains the research design, section 4 illustrates the findings of the study, and section 5 discusses findings and gives closing observations.

2. LITERATURE REVIEW

Various studies on fair value accounting have been conducted over the past decades. The majority of these studies have investigated usefulness of fair value information for the investors on capital market. Empirical studies prove disagreement of the findings. On one side, studies have found that information about fair value assets and liabilities are relevant for decision-making (Song, Thomas & Yi, 2010; Jones & Smith, 2011). Some researchers have endorsed that fair values have predictive ability for bank cash flow and earnings (Evans, Hodder & Hopkins, 2014; Ehalaiye, Tippett & van Zijl, 2017). On the other hand, studies show that in the situation when fair values are not determined based on reliable observable inputs, fair value estimates are less relevant (Goh, Li, Ng & Yong, 2015; Kolev, 2019). Al-Khadash & Abdullatif (2009) have discovered that the application of fair value accounting may distort the financial result and mislead the users of financial statements in circumstances when the financial markets are

inefficient and uncertain. The studies also prove that the application of fair value accounting leads to the increase in volatility of financial results (Novoa, Scarlata & Solé, 2009; Sun, Liu & Cao, 2011).

Some researchers have endeavoured to contribute to resolving the dilemma between fair value accounting and historical cost accounting by investigating the application of fair value measurement and its impact on accounting policy choice. They provide feedback on what companies do in practice. They believe that the level of application of fair value model manifests at its best attitudes of financial statement preparers about the usefulness of this model in circumstances where preparers have an option to choose between fair value and historical cost model.

Institute of Chartered Accountants in England and Wales (ICAEW) have conducted a survey on the implementation of International Financial Reporting Standards (IFRS) and Fair Value Directive in the European Union (EU) (ICAEW, 2007). Associated with this study, the application of fair value accounting under IFRS is much less extensive than it is sometimes assumed. It implies that 28% of EU companies that prepare financial statements in accordance with IFRS use fair value model for investment property, just 4% of companies use it for property, no company uses it for plant and equipment and no company uses it for intangible assets.

Cairns, Massoudi, Taplin & Tarca (2011) have investigated the application of fair value measurement by listed companies in the United Kingdom (UK) and Australia. They came to almost identical results as ICAEW (2007). Their results show very little voluntary use of fair value model, except for investment property. Such results suggest that most companies in the UK and Australia prefer a conservative approach to financial reporting. When it appears that companies are given an option, whether to apply a historical cost or a fair value model, they tend to choose a historical cost model.

Christensen & Nikolaev (2013) have conducted a study on a sample of UK and German companies. They selected UK and Germany because these countries are historically at opposite ends of the spectrum in terms of applying fair value accounting under the local general accepted accounting principles (GAAP). Specifically, for non-financial assets, German GAAP required only historical cost accounting, whereas UK GAAP allowed either historical cost accounting or fair value accounting for property, plant and equipment and required only fair value accounting for investment property. IFRS expands the available valuation practices in both the UK and Germany. According to IFRS, both fair value accounting and historical cost accounting are allowed for property, plant and

equipment, investment property and intangible assets. This research has detected complete omission of the fair value accounting application to intangible assets. The application of fair value to property, plant and equipment both in the UK and Germany is at the extremely low level. Only 3% of the total sample use fair value accounting for at least one asset class under property, plant and equipment. It is interesting that 44% of UK companies that used fair value for property, plant and equipment under local GAAP switched to historical cost accounting upon the IFRS adoption. Only 1% of German companies switched to fair value for at least one class of these assets upon the IFRS adoption. In the UK fair value is more common for investment property, but 23% of companies switched to historical cost accounting once they were no longer constrained to the use of fair value by the accounting regulation. In Germany 23% of companies switched from historical cost to fair value once they were no longer constrained to historical cost by the accounting regulation. It has been found that financial companies are more likely to use fair value accounting than non-financial companies. Christensen & Nikolaev (2013) have concluded that options in IFRS do not encourage German and UK companies to switch to fair value accounting and that companies generally perceive that the benefits of fair value accounting do not exceed their costs.

Yoo, Choi & Pae (2018) have investigated the use of fair value option for property, plant and equipment on a sample of South Korean companies. This option was introduced during the global financial crisis. They find that at that time a relatively high number of South Korean companies used fair value accounting. Unlike EU countries where the rate of companies that apply fair value did not exceed 5%, during the global financial crisis, in South Korea 18% of companies used this valuation model. The authors assume that public companies are more likely to choose fair value accounting than private companies, because public companies are more likely to resolve information asymmetry between managers and external stakeholders via publicly available financial statements. This hypothesis has not been confirmed. The authors reveal that private companies had tendency to use fair value for property, plant and equipment as well as public companies. The findings can be interpreted in a way that during the period of financial turmoil highly leveraged private companies use fair value for the purpose of managing their debt-to-equity ratio and to avoid the credit crunch.

Jung, Pourjalali, Wen & Daniel (2013) have investigated whether companies in the United State (US) would choose the fair value option for non-financial assets. This option is not allowed for US companies. Authors investigated what companies would do if this option was available. Less than 10% of a sample indicated that they would use fair value accounting for non-financial assets. This discovery is consistent with findings of other studies, which implies that companies are not

willing to use fair value accounting for non-financial assets in the situation when they are given an option. Authors also find a higher likelihood to adopt the fair value accounting for non-financial assets among larger, more leveraged companies, companies with more non-financial assets and companies with expertise in fair value measurement. Due to the fact that few companies prefer the fair value option, one should be careful about generalizing these findings.

3. RESEARCH DESIGN

This study investigates the application of fair value accounting in companies of Bosnia and Herzegovina. They have had a conservative approach to financial reporting in this country for many years. Historical cost accounting was the only option. Companies have had the opportunity to use fair value accounting since 2006 when IFRS was implemented for the first time. The application of fair value accounting has been required or allowed for more than ten years. It would be interesting to discover to what degree companies use this valuation method today.

The study is designed to answer the following questions: How many assets are measured at fair value? How many companies use fair value accounting? What valuation techniques are mostly used for estimating the fair value? What inputs for estimating the fair value are frequently used? Are there any differences in the application of fair value accounting among companies, taking into account their size and business sector which they belong to?

The study was conducted on a sample of 190 companies. The sample structure, designed according to the business sector they belong to and a company size, is shown in Figure 1.

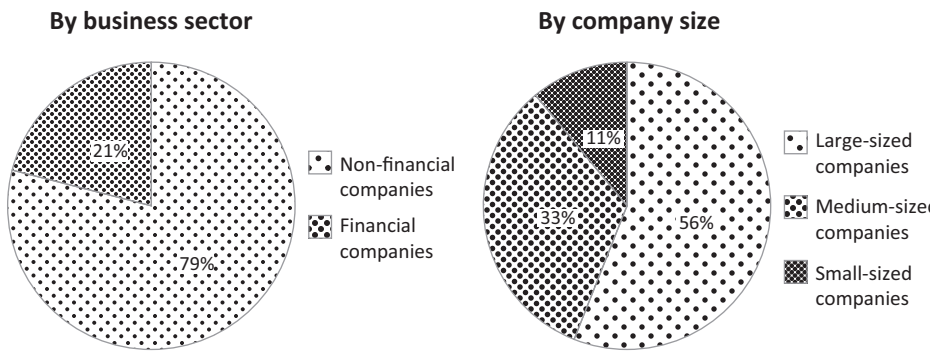

Figure 1: Structure of the sample
Source: Author's analysis

The initial objective was to conduct the study on a sample of listed companies. Listed companies are exposed to more pressure to provide relevant information to shareholders. They pay more attention to solving the problem of information asymmetry. It is assumed that the financial reporting practice is more developed in listed companies than in other companies. Therefore, it can be expected that listed companies will use fair value accounting more than other companies.

Initially, a sample of 162 listed companies was created. The sample consisted of companies which are listed on Banja Luka Stock Exchange or Sarajevo Stock Exchange and whose complete financial statements are publicly available. The analysis showed that the sample contained not more than 12 financial companies. In order to increase the share of financial companies in the sample, 28 financial companies, banks and insurance companies, which were not listed on the stock exchange, were added to the sample. In this way, a sample of 190 companies was obtained.

The data required for the study were collected from the financial statements of the companies for 2017. All companies in the sample prepare financial statements in accordance with IFRS. The total assets of companies in sample are 42 billion BAM, the total liabilities are 27 billion BAM and the total equity are 15 billion BAM. About 66% of total assets belong to financial companies that make up 21% of the sample.

4. FINDINGS

The findings of the study are presented in this section. Table 1 documents the share of assets for which the application of fair value accounting is required or allowed in the total assets. This indicates the maximum share of assets that can be measured at fair value. This does not imply that these assets are really measured at fair value. The last line in the table indicates the share of assets that, according to IFRS, cannot be measured at fair value. For the whole sample, the share of assets that can be measured at fair value is significantly lower than the share of assets that cannot be measured at fair value. The shares of these assets are significantly different in financial and non-financial companies and among large, medium and small-sized companies.

The share of assets that can be measured at fair value is smaller in financial companies than in non-financial companies. It may seem unexpected because in developed countries financial companies invest considerable funds in securities that are measured at fair value. The financial market in Bosnia and Herzegovina has not been sufficiently developed. Therefore, financial companies do not

invest a lot of funds in securities. Investments in securities are not an important source of income for them. Most of the financial companies included in the sample are banks. More than 80% of bank assets are loans that are measured at amortized cost.

Table 1. The percentage share of assets for which the use of fair value is required or allowed in the total assets

Assets	Total sample	By business sector		By company size		
		Non-financial companies	Financial companies	Large companies	Medium companies	Small companies
Assets that can be measured at fair value	31.05	72.98	9.58	30.06	72.32	82.83
Intangible assets	0.85	2.03	0.25	0.86	0.43	0.35
Property, plant and equipment	24.53	68.29	2.13	23.97	47.81	55.34
Investment property	1.02	2.16	0.44	0.54	21.55	18.93
Biological assets	001	0.03	0.00	0.00	0.28	0.00
Available-for-sale financial assets	4.30	0.44	6.28	4.36	1.75	8.23
Financial assets at fair value through profit or loss	0.33	0.04	0.48	0.33	0.49	0.00
Assets that cannot be measured at fair value	68.95	27.02	90.42	69.94	27.68	17.17

Source: Author's analysis

Table 2 documents the share of assets measured at fair value in total assets. Based on the data in Table 1 and Table 2, it is obvious how many assets can be measured and how many assets are really measured at fair value. Although 31% of total assets can be measured at fair value, less than 14% of total assets are measured at fair value. When it comes to non-financial companies, the share of assets measured at fair value is very low compared to the high share of assets that can be measured at fair value. When it comes to financial companies, the difference between these shares is not big due to the high share of financial assets in assets that can be measured at fair value. When considering large, medium and small-sized companies, it can be noticed that as the size of the company decreases, the share of assets that can be measured at fair value increases and the share of assets that are measured at fair value is approximately equal.

Table 2 also documents data about the percentage share of assets measured at fair value for each type of assets. Exactly 100% of available-for-sale financial assets and financial assets at fair value through profit or loss are measured at fair value because companies are required to measure these assets in such a way. It is interesting to observe how many assets are valued at fair value when companies

can make a choice between fair value and historical cost. The application of fair value is optional to property, plant and equipment, investment property and intangible assets. The share of assets that are measured at fair value is the highest for investment property. However, it is the lowest for intangible assets. For large companies, almost 70% of the total value of investment property are measured at fair value. The share of intangible assets that are measured at fair value is lower than 10%. Small and medium-size companies do not measure intangible assets at fair value. The share of biological assets that are measured at fair value is extremely low. Biological assets should be measured at fair value only if fair value measurement is reliable, otherwise it should be measured at historical cost.

Table 2. Percentage share of assets measured at fair value

Assets		Total sample	By business sector		By company size		
			Non-financial companies	Financial companies	Large companies	Medium companies	Small companies
Total assets	Value in millions BAM	42.292	14.316	27.976	41.321	924	47
	Measured at fair value (%)	14	13	7	14	13	13
	Measured at other bases (%)	86	87	93	86	87	87
Intangible assets	Value in millions BAM	360	290	70	356	4	0.2
	Measured at fair value (%)	9	10	7	9	0	0
	Measured at historical cost (%)	91	90	93	91	100	100
Property, plant and equipment	Value in millions BAM	10.374	9.777	597	9.906	442	26
	Measured at fair value (%)	36	36	24	37	15	5
	Measured at historical cost (%)	64	64	76	63	85	95
Investment property	Value in millions BAM	433	310	123	225	199	9
	Measured at fair value (%)	43	39	46	68	15	7
	Measured at historical cost (%)	57	61	54	32	85	93
Biological assets	Value in millions BAM	4	4	-	1	3	-
	Measured at fair value (%)	1	1	-	0	2	-
	Measured at historical cost (%)	99	99	-	100	98	-
Available-for-sale financial assets	Value in millions BAM	1.820	63	1.757	1.800	16	4
	Measured at fair value (%)	100.00	100	100	100	100	100
	Measured at historical cost (%)	0.00	0	0	0	0	0

Assets		Total sample	By business sector		By company size		
			Non-financial companies	Financial companies	Large companies	Medium companies	Small companies
Financial assets at fair value through profit or loss	Value in millions BAM	139	5	134	134	5	-
	Measured at fair value (%)	100	100	100	100	100	-
	Measured at historical cost (%)	0	0	0	0	0	-

Source: Author's analysis

Table 3 illustrates the number and the percentage share of companies that use fair value accounting. About 50% of companies that are covered in the sample use fair value accounting. Around 22% of all companies use it just because they hold assets that require measurement at fair value and 28% of all companies use it voluntarily. Almost all financial companies use fair value accounting, and most of them just because they are required. The share of companies that use fair value accounting is higher for financial companies than for non-financial. The size of the company also affects the application of fair value accounting. Not only do larger companies use it more often than smaller ones for the reason that they invest in securities more than smaller companies, but also because they voluntarily choose to use fair value accounting more frequently.

Table 3. Share of companies that use fair value accounting

Assets	Total sample	By business sector		By company size		
		Non-financial companies	Financial companies	Large companies	Medium companies	Small companies
Total number of companies	190	150	40	106	63	21
Companies that use fair value						
No. of companies	95	58	37	71	20	4
% of companies	50	39	92	67	32	19
Companies that use fair value accounting only because they have to						
No. of companies	42	22	20	30	10	2
% of companies	22	15	50.00	28	16	9.5
Companies that have chosen to use fair value accounting						
No. of companies	53	36	17	41	10	2
% of companies	28	24	42	39	16	9.5

Source: Author's analysis

Table 4 also presents the number and percentage share of companies that use fair value accounting, but data is organized by type of assets that can be measured at fair value or at historical cost. About 60% of companies that have investment property measure them at fair value. Around 23% of the companies use fair value for at least one asset class in property, plant and equipment, 15% use fair value for all types of property, plant and equipment, 8% use it only for property, mostly for land, 20% of the companies that have biological assets measure them at fair value and only 6% of the companies that have intangible assets measure them at fair value.

Table 4. Share of companies that use fair value accounting by type of assets

	Assets	Total sample	By business sector		By company size		
			Non-financial companies	Financial companies	Large companies	Medium companies	Small companies
Intangible assets	No. of companies that own assets	148	111	37	95	42	11
	No. of companies that use fair value	9	7	2	9	0	0
	% of companies that use fair value	6	6	5	9	0	0
Property, plant and equipment	No. of companies that own assets	190	150	40	106	63	21
	No. of companies that use just fair value	29	26	3	25	4	0
	% of companies that use just fair value	15	17	7.5	24	6	0
	No. of companies that use fair value and historical cost	16	8	8	10	4	2
	% of companies that use fair value and historical cost	8	5	20	9	6	10
Investment property	No. of companies that own assets	75	48	27	44	24	7
	No. of companies that use fair value	30	17	13	23	6	1
	% of companies that use fair value	60	35	48	52	25	14
Biological assets	No. of companies that own assets	10	10	0	4	6	0
	No. of companies that use fair value	2	2	0	0	2	0
	% of companies that use fair value	20	20	0	0	33	0

Source: Author's analysis

Table 5 presents the structure of assets measured at fair value by fair value hierarchy. The fair value hierarchy refers to the inputs used to measure the fair value

of an asset. Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets that the company can access on the measurement date. Level 2 inputs are observable inputs other than Level 1 quoted prices, such as quoted prices for similar assets in active markets, quoted prices for identical or similar assets in markets that are not active, etc. Level 3 inputs are unobservable inputs that should reflect the assumptions that market participants would use when pricing the asset.

Table 5. Fair value hierarchy

Assets	Total sample	By business sector		By company size		
		Non-financial companies	Financial companies	Large companies	Medium companies	Small companies
Assets measured at fair value (in millions BAM)	5.870	3.720	2.150	5.747	117	6
Assets measured at fair value by using						
Level 1 inputs (%)	14	0.20	39	14	7	0
Level 2 inputs (%)	18	0.00	49	19	0	0
Level 3 inputs (%)	1	0.03	3	1	0	0
Unknown inputs (%)	67	99.77	9	66	93	100

Source: Author's analysis

For most of the fair value assets, inputs used to measure fair value are unidentified. According to IFRS 13 – *Fair Value Measurement*, reporting entities are required to disclose information on these inputs (IASB, 2018). This information should be available in notes to the financial statements but numerous companies do not disclose them. This is particularly noticeable for non-financial companies and for small and medium-sized companies. According to fair value hierarchy, the structure of fair value assets can be analysed just for companies that disclose this information. These companies mostly use indirectly observable inputs (Level 2) to measure fair value. A low asset ratio is measured using unobservable inputs (Level 3).

Table 6 illustrates the structure of fair value assets by valuation techniques that were used for determining the fair value. The objective of valuation technique application is to estimate the price at which an orderly transaction to sell the asset or to transfer the liability would take place between market participants on the measurement date under current market conditions (IASB, 2018). Three widely used valuation techniques are the market approach, the income approach and the cost approach. Market approach is a valuation technique that uses prices and other relevant information generated by market transactions, including identical or comparable assets. Income approach is defined as a valuation technique

that converts future cash flows or income and expenses to a single discounted amount. Cost approach is a valuation technique that reflects the amount that would be required currently to replace the service capacity of an asset. In some cases, companies use a single valuation technique. In other cases, the use of multiple valuation techniques is more appropriate.

Table 6. Valuation techniques used to measure fair value

Assets	Total sample	By business sector		By company size		
		Non-financial companies	Financial companies	Large companies	Medium companies	Small companies
Assets measured at fair value (in millions BAM)	5.870	3.720	2.150	5.747	117	6
Assets measured at fair value by using						
Market approach (%)	15	1	41	16	6	0
Income approach (%)	10	0	26	10	0	0
Cost approach (%)	0	0	0	0	0	0
Multiple approach (%)	15	22	2	14	32	0
Unknown approach (%)	60	77	31	60	62	100

Source: Author's analysis

For most of the fair value assets, the data about valuation techniques used to measure fair value are not available in notes to the financial statements. This problem is more prevalent in non-financial companies than in financial ones, as well as in smaller companies than in larger ones. Companies that have disclosed data about valuation techniques mostly apply market and multiple approach to measuring fair value. There are differences referring to the volume of application of valuation techniques between non-financial and financial companies, as well as between large and medium-sized companies. Non-financial companies mostly use multiple approach for measuring fair value, while financial companies mostly use market approach. In large companies, market and multiple approaches to measuring fair value are approximately equally used. In medium-sized companies, a multiple approach to measuring fair value is dominantly used. No small-sized company has disclosed data on valuation techniques.

5. DISCUSSION AND CONCLUSION

In this study, the application of fair value accounting in Bosnia and Herzegovina is examined. The study was conducted on a sample of 190 companies. The findings prove that a low asset ratio is measured at fair value for two reasons. The first reason lies in the fact that the share of financial assets which require measuring at fair value in total assets is insufficient. The second reason signi-

fies that a reasonably small number of companies choose to use fair value accounting for non-financial assets. Half of the companies in the sample do not use fair value accounting at all. Almost half of the remaining companies use it just because they hold assets that require measurement at fair value. Obviously, most companies in Bosnia and Herzegovina do not have tendency to use fair value accounting. Based on the findings of other studies, it can be assumed that the reasons for their unwillingness to use it are related to: difficulties in obtaining fair value information; lack of technical knowledge and professional judgement skills relating to fair value among accountants, auditors and asset appraisers; complexity of fair value standards; high costs of measuring fair value, etc. (ICAEW, 2017; Christensen & Nikolaev, 2013; Jung et al., 2013). Active market for non-financial assets is not often available. When active market is not available, fair value is determined based on assessment of managers, which is one of the main challenges to the application of fair value for non-financial assets. Still, various companies have decided to use fair value accounting and they have reasons to make such a decision. Their reasons are probably related to the perception that fair value more reliably reflects the value of the assets, an urge to improve the quality of accounting information and desire to manage earnings (ICAEW, 2017).

This study shows higher application of fair value accounting than it was elaborated in studies mentioned in Section 2. It does not necessarily mean that fair value accounting is much more used in Bosnia and Herzegovina than in Australia, the UK (Cairns et al., 2011), Germany (Christensen & Nikolaev, 2013) and other EU countries (ICAEW, 2007). All the studies mentioned in Section 2 were conducted on data relating to the first year after the implementation of IFRS. Their results show to what degree fair value accounting was used more than ten years ago. Probably, the degree of their use has changed so far. Therefore, the findings of these studies are not comparable. However, if the use of fair value accounting is really higher in Bosnia and Herzegovina than in some economically developed countries, this could happen due to the fact that companies in Bosnia and Herzegovina considerably rely on the debt market when it comes to financing. Christensen & Nikolaev (2013) have found a positive association between the application of fair value for non-financial assets and reliance on debt financing. Highly leveraged companies that access debt market are commonly required under their credit arrangements to provide valuations of collateral. Creditors are interested in the fair value of assets because they aim to know their liquidation value. The application of fair value accounting for non-financial assets usually increases the likelihood of overstating the book value of assets, resulting in a decrease in

leverage ratio and thus enhanced borrowing capacity (Yoo et al., 2018; Jung et al., 2013; Christensen & Nikolaev, 2013; Aljinović Barać & Šodan, 2011).

This study indicates that financial and larger companies use fair value accounting much more than non-financial and smaller ones. The impact of company size on the application of fair value accounting is probably related to the cost of using this concept. The application of fair value accounting causes direct and indirect costs. Direct costs include appraisal fees when an independent valuer is employed, increase in audit fees and increase in record-keeping costs, whereas indirect costs are mainly opportunity costs related to the time and effort managers spend on selecting items which will be measured at fair value, reviewing fair values of the selected items, and the discussion of these values with auditors (Yoo et al., 2018, p. 98). A large amount of these costs are fixed costs. These costs are not as significant for larger companies as for smaller ones because larger companies can achieve the effects of economies of scale.

This study confirms the findings of other studies which indicate that fair value accounting is more frequently used for investment property than for other non-financial assets (ICAEW, 2017; Cairns et al., 2011; Christensen & Nikolaev, 2013). Property markets are generally more liquid and property prices have increased recently. The fair value of investment property can improve profitability indicators because the gain or loss arising from the change in fair value is recognised in profit or loss for the period in which it arises. The gain or loss arising from a change in fair value of other non-financial assets that can be measured at fair value is recognised in equity as revaluation surplus. This gain or loss does not affect the profit or loss for the period it arises in.

When it comes to property, plant and equipment companies measure land at fair value. This can be related to the fact that depreciation is not calculated on land. One of the consequences of the application of fair value accounting for depreciable assets is the increase of the depreciation base which decreases future reported financial results through increased depreciation costs. By selecting fair value accounting for land, companies can increase the value of assets and equity without worrying about the detrimental effect of the increased depreciation base on their future reported financial results. The decision to use fair value is not random and it is made when benefits outweigh costs.

The findings of this study suggest that the application of fair value accounting in companies of Bosnia and Herzegovina increases the uncertainty in their financial statements. The quality of fair value disclosures is very low, particularly for non-financial companies. Numerous companies do not disclose information at the level of fair value hierarchy and valuation techniques that were used for

fair value measurement. Therefore, it is not possible to identify the inputs that were used in determining fair values, nor the ways in which fair values were determined. Companies that disclose this information in their financial statements mostly use indirectly observable inputs (Level 2) to measure fair value. Prior studies on fair value measurements imply that assets based on lower-level fair value inputs (Level 2 or Level 3) are less transparent, associated with greater valuation uncertainty and subject to more discretion (Xu, 2019, p. 109). IFRS 13 requires detailed disclosures for Level 3 fair value assets but there are no such disclosure requirements for Level 2 assets. This suggests that Level 2 fair value measurements create more room to manage earnings than Level 3 fair value measurements. All this increases information risk and information asymmetry.

The findings of this study can be useful for financial statement preparers, users of financial statements and regulators. One should be careful about generalizing the findings because the sample is comparably small. These findings can be extended in the future research by examining the characteristics of companies that use fair value accounting for non-financial assets. It would be interesting to investigate whether profitability, leverage, proportion of non-financial assets to total assets, etc. stimulate the decision to use fair value accounting.

REFERENCES

Al-Khadash, H. A., & Abdullatif, M. (2009). Consequences of fair value accounting for financial instruments in the developing countries: The case of the banking sector in Jordan. *Jordan Journal of Business Administration*, 5(4), 533-551.

Aljinović Barać, Ž. & Šodan, S. (2011). Motives for asset revaluation policy choice in Croatia. *Croatian Operational Research Review*, *2*(1), 60-70.

Bick, P., Orlova, S. & Sun, L. (2018). Fair value accounting and corporate cash holdings. *Advances in Accounting*, 40, 98-110. doi:10.1016/j.adiac.2017.12.002

Cairns, D., Massoudi, D., Taplin, R. & Tarca, A. (2011). IFRS fair value measurement and accounting policy choice in the United Kingdom and Australia. *The British Accounting Review*, 43(1), 1-21. doi:10.1016/j.bar.2010.10.003

Christensen, H. B. & Nikolaev, V. V. (2013). Does fair value accounting for non-financial assets pass the market test? *Review of Accounting Studies*, 18(3), 734-775. doi: 10.1007/s11142-013-9232-0

Ehalaiye, D., Tippett, M. & van Zijl, T. (2017). The predictive value of bank fair values. *Pacific-Basin Finance Journal*, 41, 111-127. doi: 10.1016/j.pacfin.2016.10.008

Evans, M. E., Hodder, L. & Hopkins, P. E. (2014). The predictive ability of fair values for future financial performance of commercial banks and the relation of predictive ability to banks' share prices. *Contemporary Accounting Research*, 31(1), 13-44. doi: 10.1111/1911-3846.12028

Goh, B. W., Li, D., Ng, J. & Yong, K. O. (2015). Market pricing of banks' fair value assets reported under SFAS 157 since the 2008 financial crisis. *Journal of Accounting and Public Policy*, 34(2), 129-145. doi: 10.1016/j.jaccpubpol.2014.12.002

He, L. Y., Wright, S. & Evans, E. (2018). Is fair value information relevant to investment decision-making: Evidence from the Australian agricultural sector? *Australian Journal of Management*, 43(4), 1-20. doi: 10.1177/0312896218765236

IASB. (2018). *International Financial Reporting Standard (IFRS) 13: Fair Value Measurement*. London, UK: International Accounting Standards Board.

ICAEW. (2007). *EU implementation of IFRS and the fair value directive: A report for the European Commission*. London: Institute of Chartered Accountants in England and Wales.

ICAEW. (2017). *Fair value accounting in Chine: Implementation and usefulness*. London: Institute of Chartered Accountants in England and Wales.

Jones, D. A. & Smith, K. J. (2011). Comparing the value relevance, predictive value, and persistence of other comprehensive income and special items. *The Accounting Review*, 86(6), 2047-2073. doi: 10.2308/accr-10133

Jung, B., Pourjalali, H., Wen, E. & Daniel, S. J. (2013). The association between firm characteristics and CFO's opinions on the fair value option for non-financial assets. *Advances in accounting*, 29(2), 255-266. doi: 10.1016/j.adiac.2013.03.002

Kolev, K. S. (2019). Do investors perceive marking-to-model as marking-to-myth? Early evidence from FAS 157 disclosure. *Quarterly Journal of Finance*, 9(2), 1-47. doi: 10.1142/S2010139219500058

Novoa, A., Scarlata, J. G. & Solé, J. (2009). Procyclicality and fair value accounting. Working paper 09/39, International Monetary Fund.

Peng, S. & Bewley, K. (2010). Adaptability to fair value accounting in an emerging economy: A case study of China's IFRS convergence. *Accounting, Auditing & Accountability Journal*, 23(8), 982-1011. doi: 10.1108/09513571011092529

Song, C. J., Thomas, W. B & Yi, H. (2010). Value relevance of FAS No. 157 fair value hierarchy information and the impact of corporate governance mechanisms. *The Accounting Review*, 85(4), 1375-1410. doi: 10.2308/accr.2010.85.4.1375

Sun, P., Liu, X. & Cao, Y. (2011). Research on the income volatility of listed banks in China: Based on the fair value measurement. *International Business Research*, 4(3), 228-233. doi: 10.5539/ibr.v4n3p228

Šodan, S. (2015). The impact of fair value accounting on earnings quality in eastern European countries. *Procedia Economics and Finance*, 32, 1769-1786. doi: 10.1016/S2212-5671(15)01481-1

Wang, H. & Zhang, J. (2017). Fair value accounting and corporate debt structure. *Advances in Accounting, incorporating Advances in International Accounting*, 37, 46-57. doi:10.1016/j.adiac.2017.02.002

Xu, X. (2019). The association between fair value measurements and banks' discretionary accounting choices. *Advances in Accounting*, 44, 108-120, doi: 10.1016/j.adiac.2018.12.007

Yoo, C. Y., Choi, T. H. & Pae, J. (2018). Demand for fair value accounting: The case of the asset revaluation boom in Korea during the global financial crisis. *Journal of Business Finance & Accounting*, 45(1-2), 92-114. doi: 10.1111/jbfa.12266

ПРИМЈЕНА РАЧУНОВОДСТВА ФЕР ВРИЈЕДНОСТИ У БОСНИ И ХЕРЦЕГОВИНИ

1 Амира Побрић, Универзитет у Источном Сарајеву, Економски факултет Брчко

САЖЕТАК

Циљ ове студије јесте утврђивање степена употребе рачуноводства фер вриједности у компанијама у Босни и Херцеговини. Студија је спроведена на узорку од 190 компанија. Узорак чини 150 нефинансијских и 40 финансијских компанија, односно 106 великих, 63 средње и 21 мала компанија. Подаци потребни за студију су прикупљени из финансијских извјештаја компанија за 2017. годину. Све компаније у узорку састављају финансијске извјештаје у складу са МСФИ. Употреба рачуноводства фер вриједности изазива бројне контроверзе које се тичу релевантности и поузданости информација о фер вриједности. Вјерује се да степен употребе модела фер вриједности на најбољи начин одражава ставове састављача финансијских извјештаја о корисности овог модела. Резултати ове студије показују да већина компанија у Босни и Херцеговини не жели да користи рачуноводство фер вриједности. Половина компанија у узорку уопште не користи рачуноводство фер вриједности. Скоро половина компанија које користе рачуноводство фер вриједности, користе га само зато што имају средства која морају да се мјере по фер вриједности. Финансијске компаније користе рачуноводство фер вриједности много више него што то чине нефинансијске компаније, а веће компаније га користе много више од мањих. Добровољно, компаније користе рачуноводство фер вриједности највише за мјерење инвестиционих некретнина. То може да буде посљедица чињенице да фер вриједност инвестиционих некретнина може да побољша показатеље профитабилности јер се добит или губитак који произлази из промјене фер вриједности признаје у рачуну добитка и губитка у периоду у којем настаје. Компаније бирају да мјере по фер вриједности земљиште прије него било коју другу групу средстава у оквиру некретнина, постројења и опреме. Избором рачуноводства фер вриједности за земљиште, компаније могу повећати вриједност имовине и капитала без бриге о штетном учинку повећане амортизационе основе на њихове будуће финансијске резултате. Компаније

најмање користе рачуноводство фер вриједности за мјерење нематеријалних средстава. Одлука да се користи фер вриједност није случајна и јавља се када користи превазилазе трошкове. Такође, резултати указују на то да употреба рачуноводства фер вриједности повећава неизвјесност у финансијским извјештајима. Квалитет објелодањивања о фер вриједности је веома низак. Знатан број компанија не објелодањује информације о хијерархији фер вриједности и техникама процјене које су коришћене за мјерење фер вриједности. Компаније које објелодањују ове информације, углавном користе индиректно уочљиве инпуте (II ниво) за мјерење фер вриједности који стварају много простора за управљање резултатом.

Кључне ријечи:

Рачуноводство фер вриједности, Босна и Херцеговина, нефинансијска средства, финансијске компаније, нефинансијске компаније, величина компаније.